August 15, 2002

Mary L. Cottrell, Secretary
Department of Telecommunications and Energy
One South Station - 2nd Floor
Boston, Massachusetts 02110

Re: Investigation into Distributed Generation, D.T.E. 02-38

Dear Secretary Cottrell:

Ingersoll-Rand Company Energy Systems Division ("Ingersoll-Rand") is pleased to present its reply comments in response to the Department of Telecommunications and Energy's (the "Department") Request for Comments issued in connection with the Department's Order Opening Investigation into Distributed Generation dated June 13, 2002 (the "Order"). Ingersoll-Rand filed its initial comments on August 1, 2002. Ingersoll-Rand appreciates the Department's recognition of the importance of and potential benefits from distributed generation resources. As stated in our initial comments, Ingersoll-Rand agrees with the Department that distributed generation "has the potential to be a viable competitive alternative to customers in the restructured industry." Competitive Market Initiatives, D.T.E. 01-54, p.11 (2002).

Ingersoll-Rand's initial comments confirmed the Department's earlier findings as to the barriers to the effective development of beneficial distributed generation resources caused by the lack of uniform interconnection standards, uncertainty as to rate design for back-up service and other institutional barriers. Ingersoll-Rand encouraged the Department to address these issues and, in particular the opportunities and more limited concerns for electric distribution companies associated with smaller distributed generation projects such as Ingersoll-Rand's efficient, flexible and environmentally beneficial microturbines. Ingersoll-Rand encouraged the Department to build upon its successful experience with collaborative processes and to direct that a targeted working group be established to develop common interconnection standards, with a specific focus upon the concerns associated with smaller distributed generation projects. Ingersoll-Rand also encouraged the Department to address barriers that result from rate design and system planning procedures that create disincentives to electric distribution companies to cooperate with developers of distributed generation projects.

Ingersoll-Rand notes that a substantial consensus on a number of issues emerged from the initial comments of a wide range of stakeholders submitted in this proceeding.

First, and most importantly, there is a strong consensus on the merits of developing statewide interconnection standards. A wide range of parties recognize the merits of common standards, ranging from electric distribution companies (Western Massachusetts Electric Company ("WMECo") Comments, p. 2; Fitchburg Gas and Electric Light Company ("FGE") Comments, p. 3) to important state agencies or instrumentalities (Attorney General ("AG") Comments, p. 2; Massachusetts Renewable Energy Trust ("RET") Comments, p. 4). Industry and customer groups also expressed a preference for common interconnection standards (Cape Light Compact ("CLC") Comments, p. 3; Northeast Energy and Commerce Association ("NECA") Comments, p. 4; Gas Technology Institute ("GTI") Comments, pp. 1-2; KeySpan Energy Delivery New England ("KeySpan") Comments, p. 2). A number of parties also recognized the importance of developing standards and procedures that work well for small projects, particularly microturbines that are not likely to affect the electric utility distribution system but which can offer substantial efficiency and environmental benefits (FGE comments, p. 3; GTI Comments, p. 1; RET Comments, p. 10). Given this substantial consensus as well as the benefits described in our initial comments, Ingersoll-Rand respectfully requests that the Department take such actions as are necessary and appropriate to develop common interconnection standards and procedures for implementation by all electric distribution companies in the Commonwealth, including specific and more streamlined standards and procedures that address small distributed generation projects.

Second, a consensus emerged as to the best means to develop common interconnection standards and, perhaps, to address other institutional barriers to the development of beneficial distributed generation resources. Specifically, many parties agreed that a collaborative process involving a range of stakeholders would be particularly effective. FGE Comments, p. 2; AG Comments, p. 2; RET Comments, pp. 5, 9. Ingersoll-Rand continues to believe that such a process will be effective and encourages the Department to initiate its own collaborative group or to accept the RET's offer to facilitate such a process. Ingersoll-Rand believes that any Department directives or guidelines with respect to a collaborative process should include a mandate to specifically address the unique issues associated with small projects. The benefits of these projects should not be delayed if it takes longer to address issues associated with larger projects that may be more complex. Ingersoll-Rand agrees with the RET that the collaborative process should be commenced expeditiously and the process should include appropriate reports to the Department. RET Comments, pp. 21-22. In addition, Ingersoll-Rand believes that the Department should establish firm dates for the completion of these efforts so that there are limited opportunities for parties to frustrate the process. Again, Ingersoll-Rand would actively participate in such a collaborative process.

On a related matter, Ingersoll-Rand acknowledges the efforts of the Massachusetts electric distribution companies to begin to develop standardized interconnection procedures for very small distributed generation projects, i.e., less than 10 kw. WEMCo Comment, p. 2. Ingersoll-Rand believes that similar standards can readily be adopted for somewhat larger projects, e.g., up to 5 mw. Ingersoll-Rand believes, however, that for any such standards to be fair and valid, they must be developed through a consensus-based process with meaningful stakeholder input.

Third, a review of the initial comments demonstrates a substantial consensus as to the appropriate objectives of standby rate design and the barriers to effective development that result from current distribution rate structures. Moreover, there was a consensus that existing rates may also create disincentives for distribution companies to work cooperatively with proponents of distributed generation. See AG Comments, p. 2; CLC Comments, p. 4; GTI Comments, p. 3; KeySpan Comments, pp. 3-4; RET Comments, p. 17; Weyth BioPharma ("WBP") Comments, pp. 9-12. Ingersoll-Rand appreciates the substantial efforts of WBP in terms of assessing the potential consequences to the meaningful development of distributed generation resources that result from current rate design. Ingersoll-Rand endorses many of WBP's comments and suggestions, particularly as to the merits of a "volumetric" pricing structure for standby rates, even assuming that any standby or backup charges are appropriate. WBP Comments, pp. 11-12. This type of standby rate design reflects the primary cost causation element associated with small projects, namely energy (rather than capacity) because outages of small distributed generation facilities will necessarily be distributed randomly. The appropriateness of reliance upon such a random distribution is confirmed when one considers the fact that operators of distributed generation will have a strong incentive to operate during peak demand periods as energy savings opportunities will be most substantial. Cf. GTI Comments, p. 4. Ingersoll-Rand believes, however, that the case-by-case rate design endorsed by WBP for larger distributed generation projects would not address the unique burdens faced by small project developers.

Ingersoll-Rand believes that, while there may be substantial consensus on the appropriate rate design principles that should be applied to the development of common standby rates, The Department should recognize the fact that a streamlined approach is necessary for the meaningful development of smaller projects. Ingersoll-Rand notes that rate design issues might also be addressed effectively in a Department-established collaborative process.

Finally, Ingersoll-Rand believes that distributed generation, and particularly smaller distributed generation projects, can and should be an integral component of an electric distribution company's resource plan. Small, clean and efficient microturbines can provide a variety of economic and external benefits, including the deferral of

transmission and distribution investments. There was a consensus within the initial comments in this proceeding regarding the unique and particular benefits of distributed generation, including the deferral or avoidance of transmission and distribution investments, reduced line losses, an overall reduction in emissions and a greater diversity of generation resources thereby enhancing reliability and power quality. RET Comments, pp. 3, 11-15; Northwest CHP Initiative Comments, pp. 7-8; Department of Environmental Protection Comments, p. 3 (Distributed Generation can result in net emissions reduction if clean distributed generation technologies such as microturbines are employed); GTI Comments, pp. 203; FGE Comments, pp. 1-2. Not only should these benefits be reflected in standby or backup rate design, but Ingersoll-Rand also encourages the Department to mandate the evaluation of distributed generation within the integrated planning processes of distribution companies. Such planning should fully reflect the many benefits associated with these resources and the potential lost opportunities that result from inappropriate incentive structures. WBP Comments, p. 9. Further, and as noted in our initial comments, Ingersoll-Rand encourages the Department to consider distributed generation in the forecast process of G.L. c. 164, §69I and the implementation of pilot programs to help foster market development.

While the comments of the electric distribution companies may be read to acknowledge some of the system benefits of distributed generation resources, the Department should consider the similarity of many of the stated concerns to comments raised by electric companies when conservation programs were initially considered by the Department in the 1980's. For example, Massachusetts Electric Company's ("MECo") Comments describe the "planner's" concerns with the "lack of control" over the operation of customer-owned distributed generation equipment. MECo Comments, pp. 10, 12. These same concerns were raised in the past with respect to conservation measures. See D.P.U. 86-36. While MECo's comments might have some merit in connection with larger projects, Ingersoll-Rand believes that, similar to conservation programs, reasonable assumptions as to reliability may be made with respect to diverse, small distributed generation projects. MECo, in fact, recognizes the diversity of customer loads when helpful, but does not acknowledge the likely diversity and random nature of outages by distributed generation facilities. MECo Comments, p. 15.

In sum, Ingersoll-Rand greatly appreciates this additional opportunity to comment upon the Department's efforts to foster a fully competitive electricity market and to encourage efficient, environmentally sound, reliable and secure, and diverse energy sources. Ingersoll-Rand is encouraged by the substantial response to the Department's Request for Comments and the emerging consensus on the best means to address some of the barriers now frustrating the development of this important resource. Ingersoll-Rand encourages the Department to take expeditious action to establish a working group to pursue a collaborative effort that seeks to eliminate the market barriers

that currently frustrate development. Ingersoll-Rand would participate in such a process and will be pleased to address these comments and any questions of the Department at the public hearing scheduled in this proceeding for August 21, 2002.

Thank you for your consideration.

Very truly yours,

INGERSOLL-RAND COMPANY

By: _____
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cc: William H. Stevens, Jr., Esq.
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